



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/528,000	03/17/2000	Shiri Kadambi	P108339-09065	3384

32294 7590 08/12/2004

SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER

HOANG, THAI D

ART UNIT PAPER NUMBER

2667

DATE MAILED: 08/12/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/528,000

Applicant(s)

KADAMBI ET AL.

Examiner

Thai D Hoang

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-2 and 5 are rejected under 35 U.S.C. 102(e) as being unpatentable over Schwartz et al, US Patent No. 6,434,115 B1, hereafter referred to as Schwartz.

Regarding claim 1, Schwartz discloses a system and method for switching packets in a network. Schwartz discloses that the system comprising:

a switching node (fig. 1; element 11) that receives a plurality of incoming data packets (25xx) at a plurality of input ports (20s) for transmission the data packets to a plurality of output ports (21s), wherein the switching node 11 is one of a plurality of switching nodes 11s configured in a stack; see fig. 1 and 2 (receiving an incoming packet on a first port of a network switch for transmission to a destination port);

an input queues 41(n) couples the meta-data packets enqueued therein in order to the packet pass/drop circuit 42(n). The packet pass/drop circuit 42(n) makes a pass/drop determination based on status information for the output port module 21(n) associated with the processor module 40(n), which is stored in the output port module(n) status information store 43(n). The output port status information stored in the store 43(n) reflects the output port module's operational status, in particular its capacity at any point in time to receive additional packets from the input port modules 20(n) for transmission, and may be a function of the amount of buffering that the output port module 21(n) has available to packets retrieved from the input port modules 20(n) for transmission or drop packets if the capacity of the buffer is not available; col. 11, line 47-col. 13, line 2 (determining if said destination port is a monitored port; determining a queue status of said destination port, if said destination port is determined to be a monitored port; prescheduling transmission of said incoming packet to said destination port if said destination port is determined to be a monitored port; wherein the step of prescheduling transmission comprises dropping said incoming data packet only when the queue status of the destination port indicates that a queue for the destination port is full).

Regarding claim 2, Schwartz discloses that the status of the output ports are monitored stored in the store 43(n), and the pass/drop circuit 42 (n) makes pass/drop determination based on this information; col. 12, lines 16- col. 13, line 2 (classifying said queue status of said destination port; and taking action in accordance with said classification of said queue status).

Regarding claim 5, Schwartz discloses the status information in the provide store 43(n) is provided by the associated output port module 21(n), as represented by the OP_PORT (n)_STATUS output port (n) status signal, which forms one of the OUT(n)_CTRL/STATUS output (n) control/status signals; col. 12, lines 23-30 (determining if said destination port is a monitored port further comprises the step of receiving a status message on a communication channel)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al, US Patent No. 6,434,115 B1, in view of Zheng et al, US Patent No. 6,611,522 B1, hereafter referred to as Schwartz and Zheng respectively.

Regarding claim 3, Schwartz discloses a system and method for switching packets in a network. Schwartz discloses that the system comprising:

a switching node (fig. 1; element 11) that receives a plurality of incoming data packets (25xx) at a plurality of input ports (20s) for transmission the data packets to a plurality of output ports (21s), wherein the switching node 11 is one of a plurality of switching nodes 11s configured in a stack; see fig. 1 and 2 (receiving an incoming packet on a first port of a network switch for transmission to a destination port);

an input queues 41(n) couples the meta-data packets enqueued therein in order to the packet pass/drop circuit 42(n). The packet pass/drop circuit 42(n) makes a pass/drop determination based on status information for the output port module 21(n) associated with the processor module 40(n), which is stored in the output port module(n) status information store 43(n). The output port status information stored in the store 43(n) reflects the output port module's operational status, in particular its capacity at any point in time to receive additional packets from the input port modules 20(n) for transmission, and may be a function of the amount of buffering that the output port module 21(n) has available to packets retrieved from the input port modules 20(n) for transmission or drop packets if the capacity of the buffer is not available; col. 11, line 47-col. 13, line 2 (determining if said destination port is a monitored port; determining a queue status of said destination port, if said destination port is determined to be a monitored port; prescheduling transmission of said incoming packet to said destination port if said destination port is determined to be a monitored port; wherein the step of prescheduling transmission comprises dropping said incoming data packet only when the queue status of the destination port indicates that a queue for the destination port is full). Furthermore, Schwartz discloses that the status of the output ports are monitored stored in the store 43(n), and the pass/drop circuit 42 (n) makes pass/drop determination based on this information; col. 12, lines 16- col. 13, line 2 (classifying said queue status of said destination port; and taking action in accordance with said classification of said queue status). Schwartz does not disclose that the step of classifying queue status based on predetermined levels. However, Zheng discloses a

Art Unit: 2667

system, wherein the data output of the system is operated based on three levels of output queue status; figs. 30 and 31; col. 27, lines 5-25. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt queuing level method disclosed by Zheng into Schwartz's system in order to control output data effectively because congestion or bottleneck in the system is avoided.

Allowable Subject Matter

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1 and 3 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The following references are cited to further show the state of the art with respect to the application:

US Patent No. 6,201,792 B1 assigned to Lahat, "Backpressure responsive multicast queue."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (703) 305-3232. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

Art Unit: 2667

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang

KWANG BIN YAO
PRIMARY EXAMINER
